

RECEIVED

AUG 18 1995

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Replacement of Part 90 by Part 88 to)
Revise the Private Land Mobile Radio)
Services and Modify the Policies)
Governing Them)
) PR Docket No. 92-235
and)
)
Examination of Exclusivity and)
Frequency Assignment Policies of the)
Private Land Mobile Radio Services)

DOCKET FILE COPY ORIGINAL

PETITION FOR CLARIFICATION OR RECONSIDERATION
OF HEWLETT-PACKARD COMPANY

Hewlett-Packard Company ("HP"), by its attorneys, hereby requests that the Commission clarify and, as necessary, reconsider certain aspects of the Report and Order¹ in the above-captioned proceeding (the "Refarming Decision"), as they relate to the continued operation of critical medical telemetry and other compatible low power operations in the 450-470 MHz band.

As set forth below, the clarifications sought are fully consistent with the Commission's goal, which HP wholeheartedly supports, of establishing areas in the 450-470 MHz band that are dedicated to low power use. To this end, HP requested the Commission's freeze on high power applications, on what have been the 12.5 kHz offset channels reserved for low power use, pending resolution of issues associated with the consolidation of frequency coordination categories and the establishment of such low power areas.² The Commission's action³ was necessary to preserve the goal of the refarming process, to ensure adequate numbers of channels for all users of the band, low-power and high-power, alike.

¹ PR Docket No. 92-235, FCC 92-255 (June 23, 1995), 60 FR 37512 (July 19, 1995).

² See Refarming Decision ¶¶ 50-55.

³ Public Notice, DA 95-1771 (August 11, 1995) (the "Freeze Order").

No. of Copies rec'd
List ABCDE

0410

While some particular points of clarification are suggested below, the matters left still to be resolved are so crucial to the operation of the rules set out in the Refarming Decision that it is difficult fully to understand the impact of those rules until the open matters are resolved. Accordingly, HP suggests that all the elements of the Refarming Decision related to low power use, including operations on co-channel and adjacent channel frequencies, are interrelated and urges that all those elements be subject, in effect, to a “second look” by the Commission, once the work of the frequency coordinators and other industry representatives in hopefully arriving at a consensus plan is completed.

**A. CRITICAL MEDICAL TELEMETRY OPERATIONS
REQUIRE DEDICATED LOW POWER CHANNELS IN
THE 450-470 MHZ BAND.**

As recognized in the Freeze Order, there is a vital need for dedicated low power channels in 450-470 MHz band upon which medical telemetry and other compatible low power devices may continue to operate.⁴ HP and others manufacture medical telemetry devices that operate on the 12.5 kHz offset channels in the 450-470 MHz PLMR band pursuant to former Section 90.267 of the Commission’s Rules. Hundreds of hospitals in the United States use tens of thousands of HP’s devices alone to monitor electrocardiograph (“ECG”) and other critical information on the cardiac status of patients. These units play a vital role in allowing cardiac patients to become ambulatory within limited hospital areas, speeding their recovery and reducing the length of hospital stay and healthcare costs. In some hospitals, over 200 channels may be in use at any given time and, as hospitals consolidate, that number has been and is likely to increase.

The telemetry devices transmit at extremely low power (less than 5 milliwatts); sensitive receivers, continuously monitored by hospital personnel from short distances away, are able to pick up these signals. Unfortunately, the required sensitivity of these receivers also makes them highly susceptible to interference from outside sources. Further, the nature of the use, for acutely ill patients, requires continuous error-free transmission and reception.

Former Section 90.267 imposed power and other restrictions on the use of these offset channels, which, with careful monitoring of sources of interference and selection

⁴ Id.

of particular channels for operation inside a particular hospital, made them suitable for use by medical telemetry technology. In fact, interference from higher-power co-channel and adjacent channel radio operations already limit the number of usable offset channels in some areas to bare minimum levels.

HP sees considerable promise that the Refarming Decision, in calling upon frequency coordinators to create an area in the band for low power use, will help alleviate the channel shortage for medical telemetry which threatens to get worse as hospitals consolidate and demand for interference-free channels increases. The amended rules, however, present only half the picture. They eliminate existing protections for low-power operations, in anticipation of a new system for frequency coordination and protection of low-power use that is not yet in place. As the Commission has recognized in the Freeze Order, until these matters are addressed, it would be disastrous to implement the partial set of rules that were adopted in the Refarming Decision.⁵

**B. CERTAIN MATTERS TO BE CONSIDERED IN
ESTABLISHING DEDICATED LOW POWER FREQUENCIES.**

HP is committed to working with the frequency coordinators, other industry representatives, and the Commission's staff over the coming months to help to establish a place for dedicated low power usage in the band. Accordingly, HP does not believe that it would be helpful at this time to resolve difficult coordination issues through formal pleadings. That said, HP believes that certain structural issues may require changes in the amended rules, depending upon how the frequency coordination issues are addressed.

**1. Consideration Should Be Given to Treating Low Power
Operations as a Separate "Service" Pool.**

HP believes that the 450-470 MHz band may be used more efficiently for both low and high power operations, if low power use is treated as a kind of functional service category that cuts across traditional frequency pools, in which "eligibility" for the category would be based on technical compatibility rather than industry group. Low power operations, particularly those that operate with output powers that are at

⁵ To avoid any question, the 3.125 kHz offset channels specified in the new rules have far too little bandwidth to be of use for medical telemetry. See Refarming Decision at ¶66; 47 C.F.R. 90.267(b). Moreover, HP is not aware of any other equipment that could effectively operate on these narrow offsets.

or below 120 milliwatts, are more compatible with each other than they are with co-channel or adjacent channel higher powered operations in its own PLMR service category.⁶

By consolidating compatible low power operations from different PLMR services on designated channels, it should be possible to increase the overall number of channels available for low power use while, over time, and allowing a sufficient period for transition, also increasing the number of channels available for high powered operations that are incompatible with low power services on co- and adjacent channels. Dedicating channels for low power use should also allow the intensified use of individual frequencies that can support multiple users of particular channels at different locations within the same geographic region as long as all such uses are sufficiently low power and/or appropriately shielded (e.g., by in-building use). On the other hand, if such a functional pool approach is not followed, HP is concerned that the frequency coordination process called for under the Refarming Decision may be left to a “zero sum game,” with every new channel made available for high power being one fewer channel available for critical low power services.

To the extent that a functional low power pool can be established, limitations on the use of frequencies designated for low power operations by particular PLMR services should be removed and replaced with functional requirements that would ensure compatible low power operations that would not interfere with each other. In addition, consideration should be given to expanding the scope of 47 C.F.R. § 90.217, which establishes different technical standards for low power operations not exceeding 120 milliwatts in the Business Radio Service to all PLMR services that operate at such low power.

2. Adjacent Channel Restrictions Need to be Established.

As discussed above, interference from high power operations even on “primary” channels 12.5 kHz removed from medical telemetry operations has made some of the existing 12.5 kHz offset channels effectively unusable for low power use at some locations. Allowing such operations 6.25 kHz from the offsets channels would

⁶ The power threshold possibly could be somewhat higher where areas of operations can be confined to specified in-building locations. Moreover, in establishing a low power area, consideration should be given to substantially lowering the power threshold with higher-powered systems (who may be considering raising their powers still higher, see Refarming Decision at ¶65), transitioned to other channels with more compatible use.

make more of them unusable. Accordingly, just as was done for the low power "color dot" channels, see Refarming Decision at ¶¶98-101 and n.170, operation at 6.25 kHz channel separations in the low power areas to be established needs to be restricted to very low power (*e.g.*, 120 milliwatts) or prohibited altogether. The details of such restrictions should be considered part and parcel with the effort of the coordinators and the Commission to establish areas for low power use.

3. Once Dedicated Low Power Area(s) Are Identified, A Period For Transition Will Be Required.

To the extent that high-powered operations are permitted on frequencies previously limited to low power or that frequencies on which high-powered operations were permitted are specified for low power use, a reasonable period for transition will be required. Given the extensive operations on existing 25 MHz "primary" and 12.5 MHz "offset" channels, such changes cannot be expected to be made overnight. However, until dedicated low power area(s) are identified, such transition cannot even begin. For all concerned, there needs to be something to transition to.

While the particular time periods to be given for transition still need to be agreed upon, as a conceptual matter, their length is likely to depend on the number of existing users of particular channels - - every effort should be made to preserve those channels that are currently the most intensively used at their existing function - - and the number of channels requested to be transitioned. Further, it may be possible to develop a gradual plan, where some lesser-used channels become available in a relatively short period, while a considerably longer period is provided for others.

4. Low Power Operations Should Not Be Relegated To Secondary Status.

The operation of low power systems should not be deemed "secondary." This principle is consistent with the Commission's recognition of the importance of low power services and the need for channels to be reserved for such use. Furthermore, HP is concerned that by rendering low power operations secondary, the rules may give incentives to existing users of the 12.5 kHz offset frequencies to raise their power levels above what is really required in order to

establish "primary" status. This will, in turn, unnecessarily increase the chances of co-channel interference from such operation to medical telemetry operations.

C. NEW RESTRICTIONS ON LOW POWER OPERATIONS ON THE 12.5 KHZ OFFSET CHANNELS SHOULD BE REMOVED.

Several 12.5 kHz channels previously available for low power use in the Business Radio Service contain new restrictions on operations that appear to have been added to protect adjacent channel facilities from the new high power operations that, subject to the Freeze Order, would be permitted on these channels.⁷ There also appears to be a typographical error that restricts a channel, previously available for low power use by any business radio service, to these rendering a "central station protection service."⁸

HP does not believe that any of these additional restrictions are needed or intended to apply to low power uses of these frequencies that are consistent with those authorized under former Section 90.267, and asks that the restrictions, as to such operations (whether as to existing or new systems) be removed.

⁷ In the Business Radio Table, 47 C.F.R. §90.75: Footnote 25, regarding use near airports, has been added to twenty former 12.5 kHz offset channels: 460.6625, 460.6875, 460.7125, 460.7375, 460.7625, 460.7875, 460.8125, 460.8375, 460.8625, 460.8875, 465.6625, 465.6875, 465.7125, 465.7375, 465.7625, 465.7875, 465.8125, 465.8375, 465.8625, 465.8875; Footnote 46 that states that the frequency is not available until August 16, 1996, and will not be limited to 6 kHz bandwidth was added to seven former 12.5 kHz channels: 464.4875, 464.5125, 464.5375, 464.5625, 469.5125, 469.5375, 469.5625; and Footnote 50 that states that new systems will not be authorized was added to seven former 12.5 kHz offset channels: 462.7625, 462.7875, 462.8125, 462.8375, 462.8625, 462.8875, 462.9125.

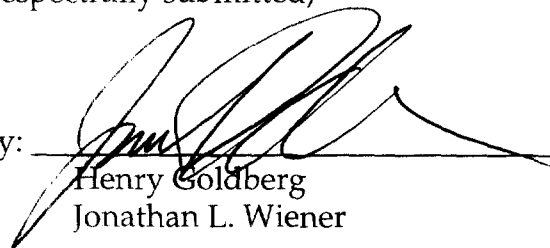
⁸ Footnote 28 was added to 466.0125.

D. CONCLUSION

HP applauds the direction taken by the Commission in the Refarming Decision calling for the establishment of frequencies in the 450-470 MHz that will be dedicated for low power use. At the same time, as recognized in the Freeze Order, there is still further to go to make the process complete.

Respectfully submitted,

By:



Henry Goldberg
Jonathan L. Wiener

GOLDBERG, GODLES, WIENER
& WRIGHT
1229 Nineteenth Street, N.W.
Washington, D.C. 20036
(202) 429-4900

Its Attorneys

Of Counsel:

Jonathan L. Weil

Regulatory Attorney
Hewlett-Packard Company
3000 Minuteman Road
Andover, MA 01810
508/687-1501

August 18, 1995